

## 1. BOSC 2017 Nominations

### Self Nomination:

Yes

### Nominator Information

First Name

Last Name

Nominator Title

Street Address

City

State

Postal Code

Email Address

Phone Number

Mobile Phone

### Nominee Information

First Name

Steve

Last Name

Carr

Nominee Title

Research Scientist

Street Address

Exemption 6

### Employment Information

Place of Employment/Work:

Los Angeles County Sanitation Districts

**Work Street Address**

1965 S. Workman Mill Road

**Work City**

Whittier

**Work State:**

California

**Work Postal Code**

90601

**Work Phone Number**

562 699-7411

**Work Email Address**

scarr@lacsdsd.org

**Sector**

Local Government

**Qualifications****Primary Area(s) of Expertise**

Synthetic Organic chemistry  
Advanced water treatment processes  
Analytical Chemistry  
Title 22 hazardous waste regulations

**Committee Preference(s)**

Safe and Sustainable Water Resources Subcommittee

**Statement of Interest**

I would like to participate in Safe and Sustainable Water Resources (SSWR) Subcommittee. My many years of working in this field would allow me to contribute meaningfully to current and future issues related to wastewater treatment, stormwater treatment and management, and water reuse.

**Skills/qualifications related to committee preference(s) specified**

O Research Scientist Geo-Research Inc. Developed Soil Vapor Analysis techniques for Subsurface Contaminant plume mapping  
O Research Scientist Chemlink Petroleum (ARCO) Inc. Developed new processes for generating and analyzing chlorine dioxide for oil field application.

Expert witness for Los Angeles County Environmental Crimes Task Force

**Other Relevant Information**

Performed extensive research on cyanide analysis and in situ formation in industrial wastewater and effluents. Studied the practical application of advanced oxidation processes for effluent cleanup.  
Conducted studies on the fate and transport of micro-plastics and micro-fibers in wastewater treatment plants.  
Studied fate and transport of N-nitrosoamines in effluents.

**CV/Resume URL**

CURRICULUM VITAE

**2. CV/Resume**

**Please upload your CV/ Resume.**

3.

**BOSC Nomination**

Jun 17, 2017 18:28:25 Success: Email Sent to: tracy.tom@epa.gov

4. Thank You for your Submission!

## *CURRICULUM VITAE*

Steve Anthony Carr

**Education**     B.SC Chemistry, **Howard University**, June 1980  
Ph.D. Synthetic Organic Chemistry, **University of Southern California**  
(Loker *Hydrocarbon Research Institute*) June 1985

### **Positions:**

2002 – Present     Supervisor of Research Group LACSD, San Jose Creek WQL Laboratory

1988 – 2002     Research Scientist LACSD responsibilities included:

- . Methods Research – Development and validation of new analytical methods
- . Quality Assurance, verification of analytical reports
- . Maintenance of Laboratory hazardous waste certification
- . Writing and editing Laboratory Procedures Manual
- . Performing laboratory audits to ensure compliance with Federal and State guidelines
- . Project Scientist for Palos Verdes Landfill RIFS study

1987 – 1988     Research Scientist Geo-Research Inc.

- . Prepared Laboratory for DOHS Certification
- . Developed Soil Vapor Analysis Techniques for Subsurface Contaminant Mapping
- . Wrote procedure and training manuals, trained laboratory chemist / technicians in hazardous waste testing

1985 – 1987     Research Scientist Chemlink Petroleum (ARCO) Inc.

- . Designed and equipped laboratory for chlorine dioxide research
- . Developed new processes for generating and analyzing chlorine dioxide
- . Consulted with technical staff and oil field clients on product applications

1981 – 1985     Research Assistant at the University of Southern California

- . The reactivity of ally silanes under lewis acid conditions
- . The generation of isonitriles from strained cyclic ethers using zinc iodide and trimethylsilyl cyanide
- . The reactivity of 3-vinyl pyridines with dihalocarbenes under phase transfer conditions
- . The insertion of dimethylsilylenes into cyclic ethers under photolytic conditions

- . Synthesis of hetero-disilacyclopropane systems under highly crowded constraints
- . Teaching Assistant at the University of Southern California
- . Freshman Chemistry 105a & b,
- . Organic Chemistry 322a & b
- . Advanced Organic Chemistry 435

1980 – 1981      Laboratory Technician Hess Oil Virgin Island Corporation

- . Laboratory Technician
- . Performed trace element and pollutant analyses on refinery wastewater

## **Publications**

- 1) Carr S.A., Liu J., Transport and Fate of Microplastic particles in Wastewater Reclamation Plants, **Water Research**, vol 91 (2016) 174-182
- 2) Carr, Steve A. "Sources and dispersive modes of micro-fibers in the environment." *Integrated Environmental Assessment and Management* 13.3 (2017): 466-469.
- 3) Bulloch, D. N., Nelson, E. D., Carr, S. A., Wissman, C. R., Armstrong, J. L., Schlenk, D., & Larive, C. K. (2015). Occurrence of halogenated transformation products of selected pharmaceuticals and personal care products in secondary and tertiary treated wastewaters from Southern California, **Environmental science & technology**, 49(4), 2044-2051.
- 4) Liu J., Carr S.A.; Removal of Estrogenic Compounds from Aqueous Solutions Using Zeolites. **Water Environment Research**, Vol. 85, 2013
- 5) Strand, J., Lewis, R., Wissman, C., Carr, S. A., Synthesis and Characterization of Selective Mesoporous Sol-gel Silica Sorbents for Detection of Eestrone in Wastewater via Molecularly Imprinted Solid Phase Extraction. **International Journal of Separation for Environmental Sciences**, 1(1), 37. 2012.
- 6) Nelson E., Do H., Lewis R.S.; Diurnal Variability of Pharmaceuticals, Personal Care Products, Estrogens and Alkylphenol concentrations in tertiary effluent, **Environmental Science & Technology**, 45 (4), pp 1228 – 1234, 2011
- 7) Robert C. Cheng, Cordelia J. Hwang, Cynthia Andrews-Tate, Yingbo "Carrie" Guo, Steve Carr and I.H. "Mel" Suffet Alternative methods for the analysis of NDMA and other nitrosamines in water *Journal American Water Works Association*, Vol. 98, No. 12 (December 2006), pp. 82-96

- 8) Khoury, J., Pang, M., Young, C., Pandit, A., Carr, S. and Fischer, D., 2005. Cyanide generation during preservation of chlorinated wastewater effluent samples for total cyanide analysis. *Proceedings of the Water Environment Federation*, 2005(10), pp.5392-5402.
- 9) Khoury, J., Pang, M., Young, C., Pandit, A., Carr, S., Fischer, D. and Stahl, J., 2008. Cyanide Generation During Preservation of Chlorinated Wastewater Effluent Samples for Total Cyanide Analysis. *Water Environment Research*, 80(1), pp.53-59.
- 10) Pandit, A., Young, C., Pang, M., Khoury, J., Carr, S., Fischer, D. and Stahl, J., 2006. Factors affecting cyanide generation in chlorinated wastewater effluent matrix. *Proceedings of the Water Environment Federation*, 2006(7), pp.4957-4970.
- 10) Neisess L.B.; Baird R. B.; Carr S.A.; Gute J. P.; *Can N-Nitrosodimethylamine formation be affected by Polymer use during advanced wastewater treatment*, **Proceedings Water-Reuse Association Research Symposium XVIII**, San Antonio Texas, September, 2003
- 11) Carr S.A.; Baird R.B.; Neisess L.B.; Young C.; Poster "Attenuation of NDMA in Natural Soils During Groundwater Recharge", **WaterReuse Research Conference**, San Francisco CA, 2003
- 12) Bradley P.M., Carr S.A.; Baird R.B.; Chapelle F.H.; Biodegradation of *N-Nitrosodimethylamine In Soils from a Water Reclamation Facility* **Bioremediation Journal**, 9( 2): 115-120, 2005
- 13) Sedlak D.L., Deeb R.A.; Hawley E.L.; Mitch W.A.; Durbin T.; Mowbray S.; Carr S.A.; *Sources and Rate of Nitrosodimethylamine(NDMA) and NDMA Precursors in Municipal Wastewater Treatment Plants*, **Water Environment Research**; Vol. 77, 1, 2005
- 14) Carr S.A.; Neisess L.B.; Rinaldi K.; Chandler W.; Poster "The Impact of Antifreeze on Effluent NDMA Concentrations", **WaterReuse Association Conference**, Las Vegas Nevada, 2004
- 15) Liu J.; Carr S.A.; Rinaldi K.; Chandler W.; *Detection of bioactive oxidized estrogens using ER binding combined with ultrafiltration and LC/MS*, **Environmental Toxicology and Pharmacology**, 20, 269-278, 2005
- 16) Carr S. A.; Baird R.B.; *Mineralization as a Mechanism for TOC Removal: Study of Ozone/Ozone-Peroxide oxidation using FT-IR*, **Water Research**, Vol 34, (16 ) pp. 4036 – 4048, 2000
- 17) Carr S. A.; Baird R.B.; Lin B.T.; *Wastewater Derived Interferences in Cyanide Analysis*, **Water Research**, Vol. 31, (7), 1543, 1997
- 18) Weber W.P.; Carr S.A., *The Reactivity of Ally Trimethylsilanes under Lewis Acid Conditions*, **Journal of Organic Chemistry**, 50, 2782, 1985

- 19) Weber W.P.; Carr S.A; *Zinc Iodide Catalyzed reaction of Oxetanes with Trimethylsilyl Cyanide*, **Synthetic Communications**, 15(9), 775-781, 1985
- 20) Carr S. A.; *Low Pressure Cryogenic processes for the isolation and quantification of chlorine Dioxide* (**Arco / Chemlink Document**), 1986
- 21) Carr S. A.; *The Reactivity of Chlorine Dioxide with Oil Field Aromatics*, (**Arco / Chemlink Document**), 1986
- 22) Carr S. A.; *Causes, Effect and Control of Corrosion*, **Chemlink / ARCO Seminar**, 1986
- 23) Carr S. A.; *Use of Butane to Simulate a Subsurface Gasoline Spill, Vapor Plume Migration Study Palo-Alto CA*, **API /Ronan**, 1987
- 24) Carr S. A.; *The Effect of Acid Preservation on Nitrite / Nitrate Concentrations in Wastewater Samples*, **CSDLAC WQL**, 1988
- 25) Carr S. A.; *The use of Ion Exchange Resins to Control Precipitation in Tannin / Lignin Analysis*, **CSDLAC WQL**, 1988

## **Memberships / Honors / Awards**

Member of American Chemical Society

Member AWWA

Member SCECS

Member NGWA

Most Outstanding Science Student Award

Graduated with High Honors in Chemistry

Teaching Assistantship, University of Southern California

Research Assistantship, University of Southern California